typography is the graphic presentation of language

National Park Service Typographic Standards Futiger Service

a collection of guidelines and examples of how typographic treatments should be handled when developing National Park Service Wayside Exhibits

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This Typographic Standards is one of the tools used by the National Park Service to create a consistent recognizable format for organizing and presenting information to the public. The Typographic Standards along with the National Park Service identity standards, editorial standards, map standards, consistent work processes, and long-term maintenance program help keep costs down and visitor interest in the wayside media at a high level.

Typographic Standards

Typography is the graphic presentation of language. The design elements of typography (typeface, size, weight, style, leading, line length, and kerning) provide the reader with visual clues to the nature and hierarchy of information. They enhance overall accessibility to wayside content by creating logical patterns, legible text, and reflect the appropriate voice of the National Park Service. The Typographic Standards document is a collection of guidelines and examples of how typographic treatments should be handled when developing National Park Service Wayside Exhibits.

Editorial Style Guide

The purpose of the Editorial Style Guide is to create a standard for writing and editing in all National Park Service interpretive media, and to define policy regarding recurring questions about grammar and editorial style. The combination of the Typographic Style Guide and the Editorial Style Guide is intended to establish a consistent typographic and editorial style that illuminates the content and adds credibility to the message.

Software: Adobe InDesign

The Harpers Ferry Center uses InDesign to develop wayside panel layouts. Adobe InDesign is a powerful electronic publishing software that handles all phases of exhibit production—from preliminary design through prepress production. As a graphic design tool, InDesign allows the designer to develop layouts using templates based on the Unigrid, incorporate text and scanned graphics into a full-sized layout, and create high-resolution, production-ready files for fabrication. InDesign has word processing capabilities that include basic editing features like cut, copy, paste, and delete, and more sophisticated features such as search-and-replace and spell check, enabling planners, writers, and editors to enter and edit text directly in a layout.

Hardware: Macintosh OS

The Macintosh operating system is the industry standard for graphic design and is the tool used by the Harpers Ferry Center. Frutiger and NPS Rawlinson are PostScript Type 1 fonts which run on both MAC and PC platforms, but with different naming conventions. Since most users are running the font on PCs, the NPS Rawlinson font family was created and named according to PC standards. However, the same font was renamed for use on the Macintosh OS. The Harpers Ferry Center uses NPS Rawlinson for MAC users.

OpenType is a new cross-platform font file format developed jointly by Adobe and Microsoft. Adobe has started converting the entire Adobe Type Library into this format and now offers hundreds of OpenType fonts. Frutiger will likely be converted by Adobe. NPS Rawlinson, a custom-made font, may also be converted to OpenType in the future.

Accessibility

All typography used in Wayside Exhibits should be legible and readable. Viewing distance, type size, weight, letter spacing, line spacing and other typographic elements all contribute to legibility. Wayside designers have evaluated the Americans with Disabilities Act Guidelines and developed a series of typographic styles that meet legibility requirements. These guidelines contain excerpts from the *Accessible Text Guidelines* publication prepared by SEGD for the U.S. Access Board.

Type Size

The larger the type, within reason, the wider the range of users who will be able to read the exhibit. Wayside typographic standards are based on "universal" communications to avoid the need for special secondary media for individuals with visual limitations.

Letter and Word Spacing

Regardless of type size, the more generous the spacing, within limits, the more accessible text will be. Wayside typographic standards are based on two fonts designed and tested for optimal legibility in letter and word spacing.

Line Spacing

The more generous the line spacing, or leading, the more accessible the text will be. Leading of 25% - 40% is preferred, although wider spacing, if used appropriately, will still be legible. Wayside typographic standards set line spacing to strike the balance between legibility and the limitations of space.

Line Length

Line length, alignment, and hyphenation are important aspects of achieving accessibility, particularly for readers with a restricted field of vision. Lines should not be too short, which require tedious reacquisition of the beginning on new lines, or too long, which can cause readers to lose their place when moving from one line to the next. A line length of 8 - 15 words is generally most effective. The Wayside Grids are useful in setting appropriate and accessible line lengths.

Alignment

Text is best aligned flush left, as fully justified text can create problematic word spacing. All wayside text with the exception of labels for diagrams, should be set flush left.

Hyphenation

Hyphenation should be avoided, as piecing back together the parts of hyphenated words can be an obstacle for readers with impaired vision. The style sheets in the Wayside Grids are set to "No Hyphenation."

Contrast and Color

There are three perceptual attributes of color which affect contrast, these are hue, meaning the actual color itself such as blue,red or green; saturation, meaning the intensity of the color such as dull blue or bright blue; and lightness, such as light blue or dark blue. Contrast based on lightness will work much more effectively than contrast based on hue or saturation. The better the contrast, the more accessible the type. Large areas of white however, should be replaced with pale colors or light gray to avoid glare in the outdoor environment.

Content and layout

A layout that presents clear heirarchical patterns can contribute to legibility and clarity. The elements of a layout should be sensibly located and follow logical progressions. Decorative elements should be avoided so as not to obscure the content of the interpretive components. Simple layouts are preferable because of their inherent clarity.

Message Project

In September 2001 Director Fran Mainella issued "Communicating the National Park Service Mission." Specific goals are outlined to increase public awareness of the work of the National Park Service. One of those goals is to adopt the new graphic standards. While the unigrid standards for waysides had been in place for ten years, the Arrowhead was not used and park and agency information was only occasionally included. Harpers Ferry Center revised the grids to include the park and agency names as well as the newly restyled arrowhead. Below are examples of old and new waysides.

Original Unigrid wayside

The Unigrid System was originally created by Massimo Vignelli in 1978 for National Park Service publications, and later extended to wayside exhibits in 1990.

NPS Identity Wayside Standard





The grid

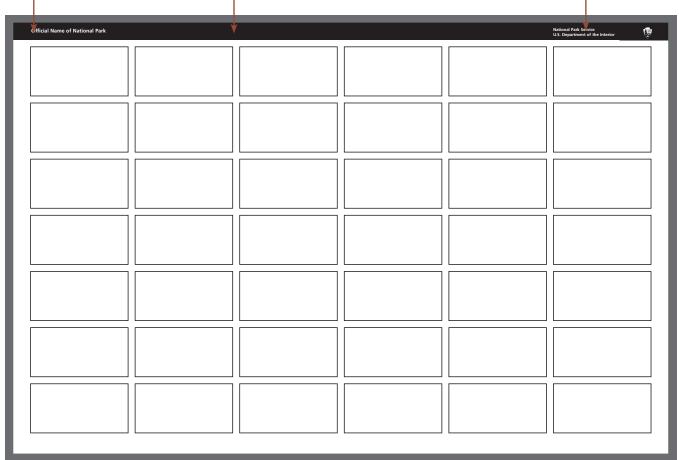
A design system provides the advantage of a reassuring sense of familiarity to the visitor, build trust in the organization, and make it easy to find information. Good design will make the visual elements reflect the content and provide an organizational structure that is accessible and understandable.

One of the tools used by the National Park Service is an underlying grid or template for wayside exhibits. The purpose of the template is to create a consistent recognizable format for organizing and presenting information to the public. It is a structural framework used to support a clearly articulated hierarchy of information. The grids, along with graphic, editorial and map standards, consistent work processes, and life-cycle maintenance help keep costs down and visitor confidence in the wayside media at a high level.

Park Name is 20 point Frutiger Bold set on one line or 16/20 when the park name is set on two lines. Black Band is 8 picas

Agency identity is set in Frutiger Bold at 16/20.

Arrowhead file AH_ small_BW_b.eps prints at 40% of full size.



This **36"w x 24"h grid is** used for low-profile interpretive exhibits.

Fonts

Two distinctive fonts have been chosen for use on all NPS Wayside exhibits. Frutiger is used primarily for agency and park identity as well as for maps and safety information. NPS Rawlinson is used for titles, text and captions.

Frutiger

Frutiger is a sans serif type family named for its designer, Adrian Frutiger, who originally developed it for outdoor signs in 1964. The type's open letter forms make it ideal for long-range viewing, but it also works well in print, especially at small sizes. Frutiger's clean and unaffected forms make it an attractive modern typeface. When paired with NPS Rawlinson, Frutiger will help establish an organizational identity that is mindful of the past, but fresh and appealing today.

ABCDEFGHIJKLMNOP abcdefghijklmnop 0123456789

Like Frutiger, NPS Rawlinson is an elegant but sturdy serif type family designed specifically for the National Park Service. Its old style letterforms, which are derived from classic European faces, help reinforce the agency's rich graphic history. Rawlinson works well in a full range of applications, from park newspapers and other publications, to outdoor signs.

NPS Rawlinson

ABCDEFGHIJKLMN abcdefghijklmnopqrst 0123456789

Using the fonts

The National Park Service uses Frutiger it under license from Adobe, a California software development firm, from whom the NPS purchased a limited site license. Our agreement with Adobe permits NPS employees to use Frutiger, but it does not allow us to transfer it to others. To acquire Frutiger and NPS Rawlinson, download the fonts from the NPS Graphic Identity website http://www.graphics.nps.gov/ For a complete list of license restrictions for Adobe Frutiger go to http://www.graphics.nps.gov/contractors.htm

Vendors and contractors must buy Frutiger as a part of doing business with the NPS and add it to their library of typefaces.

Successful wayside exhibits inspire a connection between the visitor and the resource. Because they are located directly adjacent to features on the landscape, they foster an immediate and direct association of information and place. This paper addresses the philosophy of wayside exhibit design as a form of interpretive media.

Freeman Tilden defined interpretation as: "An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information." Wayside exhibits are an "illustrative media" that illuminate features on the landscape as "original objects" enjoyed "firsthand" by active visitors.

Site selection

Wayside design is the process of visualizing the meanings and relationships of the landscape and fostering firsthand visitor experiences. Waysides give focus to significant features on the landscape and facilitate their connection to larger meanings. They foster a direct interaction between visitors and park resources. Outdoors, the site is the "original object" and waysides are the caption to the landscape. With meaningful sites identified, the next consideration is the audience.

Audience

Visitors are out of their cars and on the move. What is the best location to capture their attention, encourage them to pause, and provide an interpretive moment? Envision yourself standing before a significant feature along a trail. Why did you stop where you did? If you have 3 seconds to grab a visitor's attention, what will spark a connection to the site? Don't expect anyone to read your carefully crafted text unless they can comfortably pause along the "wayside" of their walk. There are some who will read every word you put before them, but aim for those visitors who are charging headlong through a park hoping to have a great time. Consider young children and non-English speakers. As they charge through, grab a moment of their time by grabbing their attention. Take 30 seconds to keep them engaged with a dynamic visual presentation that makes an immediate connection to the landscape. Use carefully crafted words to reveal that, yes, this is the site, the actual place, the "original object." But don't keep their attention away from the landscape too long by expecting them to read in-depth information or get the whole story because, after all, their experience should be of the park itself. Seek to interpret – spark the questions, and let them move on up the trail to further their firsthand experience.

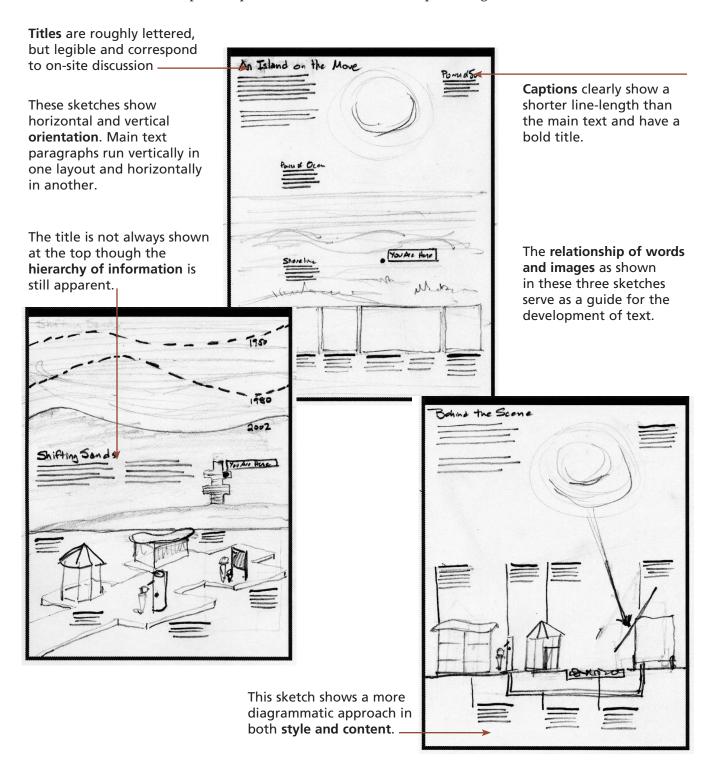
The first visuals

While your team (subject matter expert, writer, designer, interpreter) is on site put ideas on paper to help facilitate the discussion. Sketch small thumbnails to encourage simplicity and focus. Have actual graphics on hand but don't be limited by them. Brainstorm ideas and draw them all. The quality of the drawing is not as important as the ability to show ideas, hierarchy of information, and graphic options. Even at this very early stage, typography is a consideration. Sketches provide the first indications of text hierarchy, focus, quantity, and content.

Thumbnails

Wayside designers visualize exhibits by creating thumbnail sketches. Even at this early stage of development, typography is a consideration. These early sketches provide the first indications of text hierarchy, focus, quantity, and content.

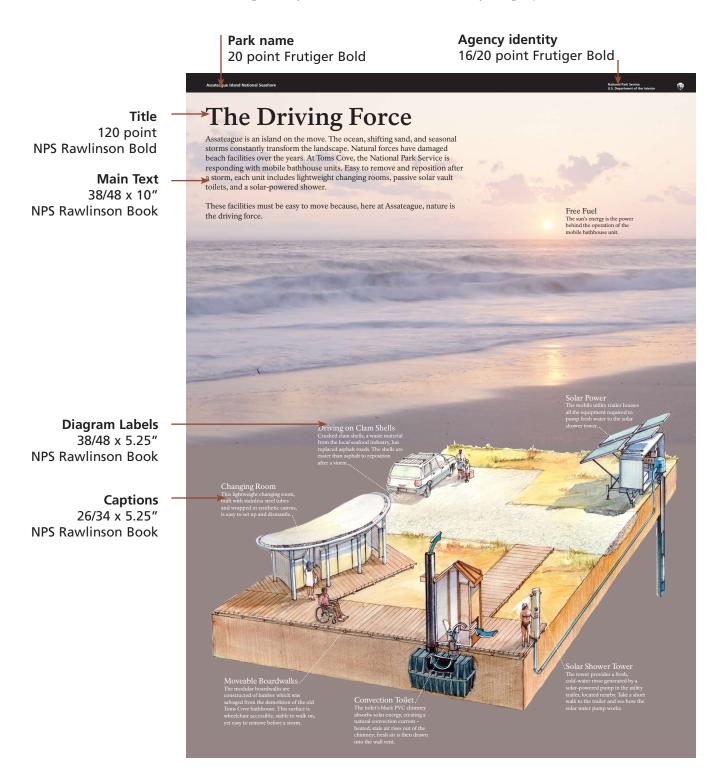
These sketches show three approaches to interpreting how new park facilities will provide public accommodations while protecting the island and the environment.



Conceptual Layouts

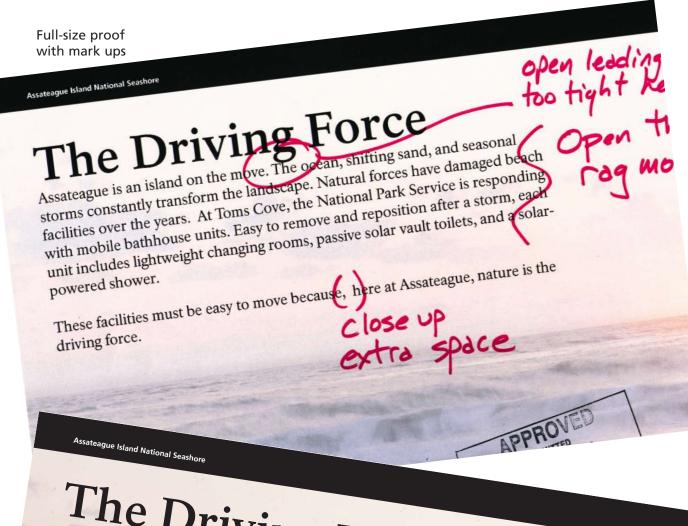
Once the project team has agreement on the purpose of each wayside, content, and visual approach, digital files are developed. Draft text is placed in the files and the typographic treatment is refined.

The designer will determine font, point size, line length, leading, and color. The conceptual layout is reviewed and refined by the project team.



Full-size Proofs

Full-size prints are proofread by the project team, marked-up with final corrections and typography is completed prior to fabrication.



The Driving Force

Assateague is an island on the move. The ocean, shifting sand, and seasonal storms constantly transform the landscape. Natural forces have damaged beach facilities over the years. At Toms Cove, the National Park Service is responding with mobile bathhouse units. Easy to remove and reposition after a storm, each unit includes lightweight changing rooms, passive solar vault toilets, and a solar-powered shower.

These facilities must be easy to move because, here at Assateague, nature is the driving force.

Final typographic treatment

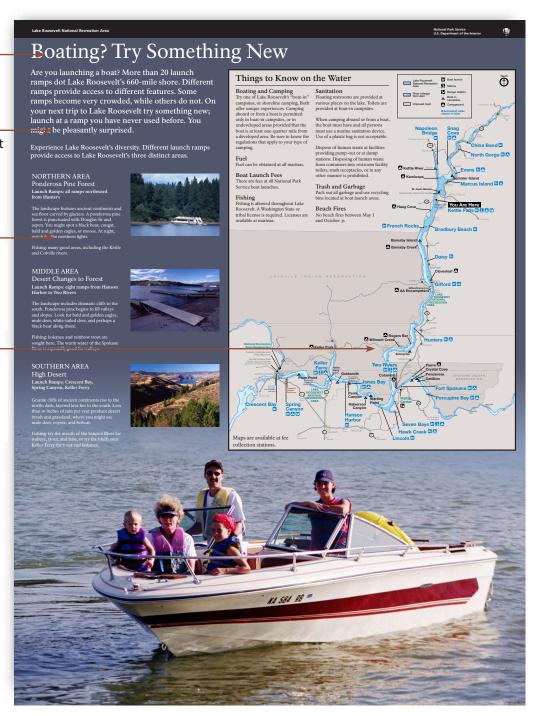
Upright Trailhead 36"w x 48"h

Title - 120 point NPS Rawlinson Bold set on one line

Main Text - 38/48 point NPS Rawlinson Book (use Medium for reversing type out of dark backgrounds)

Caption - 26/34 point NPS Rawlinson Book (use Medium for reversing type out of dark backgrounds)

Use Frutiger for map labels following the Wayside Exhibit Map Standards



Specifications

Low-profile 36"w x 24"h

Title - 100 point NPS Rawlinson Bold set on one line When using a **quote** as a graphic element, use NPS Rawlinson Italic at a large point size with open leading. This quote was set in NPS Rawlinson Bold Italic at 48/62. Use a loose open rag and set line breaks at a natural pause in the quote.



Main Text - 32/45 point NPS Rawlinson Book **Caption** - 22/28 point NPS Rawlinson Book

Specifications

Low-profile 22"w x 18"h

Title - 80 point NPS Rawlinson Bold set on one line Main Text - 30/40 point NPS Rawlinson Book

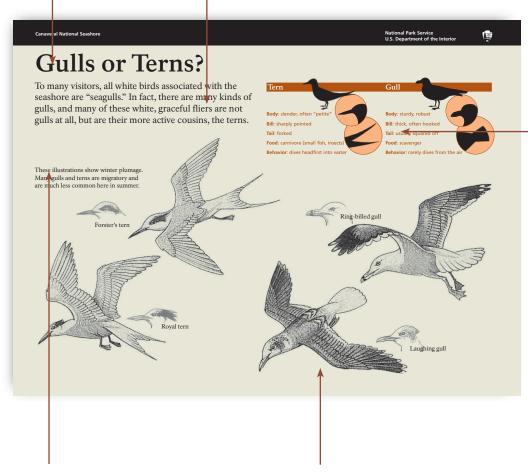


Diagram labels 18/32 point Frutiger Bold and Frutiger

Caption - 20/26 point NPS Rawlinson Book

Labels - 20 point NPS Rawlinson Book set on one line

5 x 12 Trailside

Title - 45 point NPS Rawlinson Bold set on one line

Text - 20/28 point NPS Rawlinson Book

Balsam Poplar

t'aghes (taw-wess)

Ahtna gathered balsam poplar (*Populus balsamifera*) firewood, abundant near their fish camps, for its slow-burning quality, desirable for fish smoking. When the tree's sap ran thick in early summer, Ahtna indulged themselves by drinking it after cutting and scraping the prized juice from the inner bark.



Secondary Title -32 point NPS Rawlinson Bold Italic set on one line in second color

Guidelines for writing text

When writing text for use in exhibit panels, the following guidelines make the design process more efficient:

- Keep headers, such as "Text," or "Caption," etc., on separate lines.
 Do not use tabs or the spacebar to indent text. Each tab or series of spaces needs to be removed individually. Set your margins in your Word document to accommodate space for review comments.
- Use hard returns only when inserting line spaces between paragraphs. Do not use the spacebar. Do not use hard returns at the end of each line of text.
- Avoid double space between sentences. Do not insert extra spaces between words. Use single word spaces only. Use find/search and replace to eliminate extra spaces.
- If text is intended to be used in a table, input copy as it should be intended using the set tabs feature in the word processing application. Insert only one tab per column.
- Any attributes applied to your text in Microsoft Word will not be picked up when it is transferred into an InDesign layout.

Common Practices

To facilitate the exhibit design process while working in InDesign it is necessary that everyone involved, no matter the discipline, follow common practices.

- When editing the typestyle, select the font directly from the font menu under style. Using the typestyle selection in the style menu only assigns the attribute to the previously selected font. This is not the true font.
- To change the rag, use the shift-return (soft return) key to retain paragraph settings; do not use the space bar to insert spaces to the end of the line.
- When adding text to an existing text box, open the text box to view the entire text. Select the text box with the content tool then grab the small square "handle" centered at the bottom of the text box.
- Use hard returns only when inserting line spaces between paragraphs. Do not use the spacebar.
- Eliminate word breaks. Use shift-return to bring the beginning of the word to the next line instead of inserting a hyphen.
- Avoid double space between sentences. Do not insert extra spaces between words. Use single word spaces only. Use find/search and replace to eliminate extra spaces.
- Do not use hyphens, single or double (- or --) in place of a dash.
 Use of an em-dash and en-dash is described in Punctuation on page 18.
 See the HFC Editorial Style Guide for appropriate use of hyphens.
- Apply the typographic style guidelines consistently.

Punctuation

This section on punctuation identifies areas where specific design considerations are needed. Please refer to the *HFC Editorial Style Guide* for editorial usage.

Rag

Hyphenation should be avoided, as piecing back together the parts of hyphenated words can be an obstacle for readers with impaired vision. Use the style sheets in the Wayside Grids which are set to "No Hyphenation." When adjusting the rag, use shift-return keys, rather than using letter spaces or a hard return.

Ellipses

Three small dots used to represent an omission within a quoted passage, an ellipses character is created by typing a space, period, space, period, space, period space.

Westbrook's opening reception . . . showed his strength and smarts.

A period and an ellipsis indicate the omission of the last part of the sentence.

We can only wonder what the nation will face in the coming years. Will it be war, or peace? becomes,

We can only wonder what. . . . Will it be war, or peace?

Lists and Bullets

Bullets are most often used to mark items in a list. The preferred character for creating a bullet is Option and 8, which results in a proportional bullet for the font and point size used. Bullets should hang in the left margin.

- use the character combination of Option and 8
- · hang in the left margin

Dashes and Hyphens

Phrases in sentences should be set off by an em-dash. An em-dash is created by selecting Option and shift while striking the hyphen (-) key. Open the spacing slightly with 15 points of kerning before and after the dash

Saguaro reproduction begins during the hottest, dryest times of the year—late spring and early summer.

Use an en-dash to indicate a range (such as in a range of time, 5:00 p.m.–6:00 p.m., or dates, 1963–1997). Make an en-dash by using the keystroke combination Option and hyphen. Kerning may need to be adjusted so that the en-dash is evenly spaced, especially between 1 or 7.

Do not use hyphens, single or double (- or --) for either type of dash. See the *NPS Editorial Style Guide* for appropriate use of hyphens.

Abbreviations

Letterspace acronyms such as CCC or NPS or abbreviations such as A.D. with tracking amounting to 5% of the type size. So if CCC is set in NPS Rawlinson, track the initials 1 point.

Directional Cues

Graphic captions sometimes refer to an element on one side or another, or above and below. When a directional cue is given in the text it is placed in parentheses and set in a bold typeface.

President Theodore Roosevelt (left) addressed a crowd of 70,000.

Use baseline shift to center the parenthesis between the cap height and baseline.

(left) (left)

In this case the left parenthesis is nearly touching the first letter. Raising it slightly (3 points) eliminates the visual tension.

Foreign Language

When a second language is used in a wayside exhibit it is preferable to set it in a different color from the English text. Select a color with similar contrast to the background. Do not set the second language in italics.



Often other languages use additional characters in their alphabets. Those special characters can be created on Macintosh keyboards using the following key stroke combinations:

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Accents – Option e, then the appropriate vowel character á é í ó ú Circumflex – Option i then character (rare in Spanish) î

Tilde – Option n, then character. ñ

Umlaut – Option u, then character. Mostly used for dipthong vowels. ü ö

Cedilla – Option c (very rare, mostly archaic) ç

Questions in Spanish – Option, shift, question mark. ¿

Exclamations in Spanish – Option 1 ;
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Hawaiian Language

Many Hawaiian words require special characters, a macron (¯) and a glottal stop (ʻ). For example: 'Ōhi'a lehua

A macron is created by typing option - shift - , (comma) and then the lower case vowel. Kerning is required to center the macron over the character. Use the character combination option - shift - b to make a lowercase i without a dot. For uppercase letters use superscript to raise the macron above the letter. Adjust the superscript offset setting to 20% in typographic preferences.

The glottal stop is a sound, not a letter, but is expressed typographically using an inverted apostrophe. This is created using option and the right bracket (]).

āēīoū ĀĒĪOŪ

A macron as it should appear over each vowel

a'a A glottal stop

Numbers, Fractions and Measurements

Any series of numbers that include the numeral one need additional kerning.

1776 1776

On the right the numbers have been tracked -10 and the numeral 1 has been kerned -12. The result is numbers which are evenly spaced, tight but not touching.

Fractions should be set as a true typeset fraction like, $1\frac{1}{2}$, not as a keyboard fraction, 1 1/2. This can be done in QuarkXpress using a special extension.

Measurements are usually only given in English measure. Metric is used only if circumstances call for it: if a large number of foreign visitors visit the park, special scientific usage is a concern, or a specific request by a park. When used in text, English measure is given, followed by the abbreviated metric equivalent in parentheses. Metric is set lowercase Roman, use one space between the figure and the metric unit. Periods are not used with the metric abbreviation and the abbreviated symbol is always singular.

In Pine Creek a 14-inch (36 cm) rainbow trout is common.

When elevation data is used on labels it should appear as it does on a map. See Wayside Exhibit Map Standards for more information.

Mt. McKinley 20,320ft 6,194m

Use a single word space between sentences.

Spacing

There should not be any additional space between strings of initials. However, additional kerning may be needed between initials and periods so that they are evenly spaced, tight but not touching.

W.B. Yeats

Glossary

Ascender The part of a lowercase letter that rises above the body of the letter,

as in b, d, f, h, k, l, and t.

Baseline A horizontal line upon which all the characters in a given line stand.

Boldface A heavier version of a letterform.

Cap height The height of a capital letter.

Decender The part of a lowercase letter that falls below the body of the letter,

as in g, j, p, q, and y.

Em-space Horizontal spacing is measured in ems. One em is a space as long as the point size of

the type. Based on the letter M which in metal type was cast on a square.

En-space Horizontal spacing is measured in ens. One en is a space half the width of an em.

Flush left (or right)

Type that aligns vertically on the left (or right).

Font Complete assembly of a given alphabet (upper and lower case letters, numerals,

punctuation marks, points, reference marks, etc.) in a given size, of one typeface.

Hanging punctuation

Punctuation that is set just outside the measure to achieve optical alignment, as in

hanging quotation marks.

Italic A letterform that slants to the right — as opposed to roman.

Kerning Adjusting the spacing between letters.

Leading The space between lines of type measured from baseline to baseline.

Letterspacing The space between letters.

Line length Length of a line of type, normally expressed in picas or picas and points.

Orphan An isolated line of type created when a paragraph begins on the last line of a page.

Pica A typographic unit measure most often used to denote the length of a line of type. 6

picas =1 inch

Point Smallest unit of typographic measure. Used to describe type size. 12 points = 1 pica

Rag In a column of type, the side of the column that is not aligned is called the rag.

Roman Upright letterforms — as opposed to italic.

Serif A stroke added to the beginning or end of the main strokes of a letter.

Tracking Adjusting the spacing between letters.

Widow A single word that remains at the end of a column of text. These should be eliminated.

Word space The space between words.

X-height Height of the body of lowercase letters, exclusive of ascenders and

descenders. Originally, the height of a lowercase x.

Quick Reference for	r the Wayside Exhibit Typographic Standards
Bullets	Option - 8 Hang in margin and set tabs to align.
Em-dash	Option+ Shift, -
En-dash	Option, -
Fractions	Go to Type Menu, Glyphs and double-click on fraction to get ½
Kerning	Use Optical kerning in Character menu
Parenthesis	Use baseline shift to center parenthesis.
Quotation (open)	Option, [
Quotation (end)	Option + Shift, [
Rag Adjustments	Shift - Return
Review Checklist	
	Alignment
	Bullets
	Editorial Style
	Kerning
	Numbers
	Punctuation
	Rag
	Spacing between sentences
	Spacing between words
	Spelling
	Typestyle
	Widows